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EXAMINER

NAJARIAN, LENA

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3626

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/602,643

Applicant(s)

ROTHSCHILD ET AL.

Examiner

Lena Najarian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-83 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-83 is/are rejected.
- 7) ☒ Claim(s) 82 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1100;0204;1201;601.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The claims do not commence on a separate sheet in accordance with 37 CFR

1.71(f). The claims must be presented on a separate sheet, apart from any other text.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because its length exceeds 150 words. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 82 is objected to because of the following informalities: "and imaging machine" should be "an imaging machine" on lines 1-2 of claim 82. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-33, 54-57, 78-79, and 81 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Claims 1-33, 54-57, 78-79, and 81 recite the limitations for which there is no antecedent basis in the claims. In particular, the following passages lack or have vague antecedent basis:

(i) "the second interface": claim 21, line 5

(ii) "the medical imaging clinic": claim 78, lines 3 and 4

claim 79, line 7

(iii) "said one or more electronic medical images": claim 81, line 2

(iv) "the medical imaging device": claim 1, line 7

claim 4, line 2

claim 14, line 1

claim 15, line 1

claim 54, lines 5-7

(v) Claims 2-3, 5-13, 16-20, 22-33, and 55-57 incorporate the deficiencies of claims 1 and 54, through dependency, and are also rejected.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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8. Claims 1-4, 10-12, 14-19, 25-26, 34-37, 41-50, 54-60, 62-63, 65, 68, and 71 are rejected under 35 U.S.C. 102(e) as being anticipated by Wong et al. (US 6,260,021 B1).

(A) Referring to claim 1, Wong discloses a medical image management system, comprising:

a medical imaging system which is adapted to produce an electronic record in a computer-readable format and that comprises an electronic image associated with a region of a patient's body;

a local image workstation which is adapted to communicate with the medical imaging system along a local interface such that the electronic record may be transmitted from the medical imaging device and received by the local image workstation; and

a central data management system which is adapted to communicate with the local image workstation along a remote interface such that the electronic record may be transmitted from the local image workstation and received by the central data management system, and which is configured to push the electronic record to a pre-determined remote viewing system in a format such that the electronic record may be read and the electronic image converted to a recognizable, visible format (Fig. 1 and col. 7, lines 1-28 of Wong; the Examiner interprets "clients" to be a form of "local image workstation," "medical image server" to be a form of "central data management system," and "medical image information systems" to be a form of "medical imaging system").

(B) Referring to claim 2, Wong discloses wherein at least one of the medical imaging system, the local image workstation, and the central data management system is

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adapted to transmit the electronic record in a DICOM format (col. 2, lines 30-35 of Wong).

(C) Referring to claim 3, Wong discloses wherein the central data management system is adapted to receive and process the electronic record in a DICOM format (col. 7, lines 34-35 of Wong).

(D) Referring to claim 4, Wong discloses wherein the local image workstation is adapted to receive the electronic record from the medical imaging device in a non-DICOM format and is adapted to convert the electronic record into a DICOM format for transmission to the central data management system (col. 7, lines 38-58 of Wong).

(E) Referring to claims 10 and 11, Wong discloses wherein the local interface comprises a hard-wired interface and wherein the remote interface comprises a publicly accessed telecommunication interface (col. 3, lines 25-30 and col. 1, lines 7-12 of Wong).

(F) Referring to claim 12, Wong discloses wherein the remote interface comprises the internet (Fig. 1, item 36 of Wong).

(G) Referring to claims 14 and 15, Wong discloses wherein the medical imaging device is selected from the group consisting of: magnetic resonance imaging devices, CT scanner devices, ultrasound devices, computed tomography devices, nuclear medicine devices, digital radiography devices, and X-ray devices and wherein the medical imaging device comprises a magnetic resonance imaging device (col. 1, lines 23-31 of Wong).

(H) Referring to claims 16 and 17, Wong discloses wherein the central data management system comprises a storage system which is adapted to store the

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electronic record and wherein the local image workstation comprises a storage system which is adapted to store the electronic record (col. 1, lines 42-66 of Wong).

(I) Referring to claim 18, Wong discloses further comprising a remote image viewing system which is adapted to communicate with the central data management system along a second remote interface such that the electronic record may be pushed from the central data management system and received by the remote image viewing system (Fig. 1 and col. 6, line 65 – col. 7, line 28 of Wong).

(J) Referring to claim 19, Wong discloses wherein the remote image viewing system comprises a storage system which is adapted to store the electronic record (col. 3, lines 42-56 of Wong).

(K) Referring to claim 25, Wong discloses wherein at least one of the remote interfaces comprises a network with at least one server (Fig.1, item 12 of Wong).

(L) Referring to claim 26, Wong discloses wherein at least one of the remote interfaces comprises the internet (Fig. 1, item 36 of Wong).

(M) Referring to claim 34, Wong discloses a medical image management system comprising:

a medical imaging means at a first location for producing an electronic record in a computer-readable format and that includes an electronic image associated with a region of a patient's body;

a storage means for storing the electronic record; and

a pushing means for pushing the electronic record along a remote interface to a remote image viewing system at a second location that is remote from the first location,

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wherein the electronic record is pushed in a format that may be opened such that the electronic image may be converted into a recognizable, visible format (col. 1, lines 1-28 and Fig. 1 of Wong).

(N) Referring to claim 35, Wong discloses a viewing means associated with the remote image viewing means for viewing the electronic image at the second location (col. 3, lines 42-60 of Wong).

(O) Referring to claim 36, Wong discloses means for providing information related to the patient in the electronic record (col. 1, lines 52-56 of Wong).

(P) Referring to claim 37, Wong discloses DICOM conversion means for converting the electronic record from a non-DICOM format to a DICOM format (col. 7, lines 38-58 of Wong).

(Q) Referring to claim 41, Wong discloses DICOM conversion means for converting the electronic record from the medical imaging means into a DICOM format (col. 7, lines 38-58 of Wong).

(R) Referring to claim 42, wherein the storing means comprises:

- a local storage means for storing the electronic record at the first location;

- a remote storage means for storing the electronic record at the second location;

and

- a central storage means for storing the electronic record at a third location that is associated with a central data management system and that is remote from the first and second locations (col. 3, line 61 – col. 4, line 15 of Wong).

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(S) Referring to claim 43, Wong discloses wherein the central storage means comprises a back-up storage means for storing the electronic record at a fourth location that is remote from the first, second, and third locations (col. 12, lines 41-43 of Wong).

(T) Referring to claim 44, Wong discloses wherein the pushing means comprises:

a local pushing means at the first location for pushing the electronic record to a central data management system at a third location which is remote from the first and second locations; and

a central pushing means which is associated with the central data management system at the third location for pushing the electronic record from the third location to the remote image viewing system at the second location (Fig. 1 and col. 7, lines 1-28 of Wong).

(U) Referring to claim 45, Wong discloses wherein the pushing means comprises:

a central data management system at a third location that is remote from the first and second locations and which is adapted to receive the electronic record from the first location and to push the electronic record to the remote image viewing system at the second location (Fig. 1 and col. 7, lines 1-28 of Wong).

(V) Referring to claim 46, Wong discloses display means associated with the remote image viewing system for displaying the electronic image in a recognizable, visible format at the second location (Fig. 1 and col. 7, lines 1-28 of Wong).

(W) Referring to claim 47, Wong discloses a medical image management system, comprising:

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a local image workstation adapted to communicate with a medical imaging system along a local interface at a first location such that the local image workstation may receive an electronic record that includes at least in part an electronic image from the medical imaging system;

a central data management system which is adapted to communicate with the local image workstation along a first remote interface from a second location that is remote from the first location, such that the central data management system is adapted to receive the electronic record from the local image workstation,

a remote image viewing system which is adapted to communicate with the central data management system along a second remote interface from a third location that is remote from the first and second locations, wherein the remote image viewing system has a remote image storage system adapted to store the electronic record in a computer readable format, the remote image viewing system further being adapted to open the electronic record from the remote image storage system and to convert the electronic image into recognizable, viewable format; and

wherein the local image workstation, remote image viewing system, and central data management system are all respectively configured and networked such that the local image workstation pushes the electronic record via the central data management system to the remote image storage system (Fig. 1, col. 3, lines 42-56, and col. 7, lines 1-28 of Wong).

(X) Referring to claim 48, Wong discloses wherein the central data management system comprises a central image storage system that is adapted to store the electronic record in a computer-readable format (col. 2, lines 38-45 of Wong).

(Y) Referring to claim 49, Wong discloses a back-up storage system at a fourth location that is adapted to store the electronic record in a computer-readable format, wherein the central image storage system is adapted to transmit the electronic record to the back-up storage system (col. 12, lines 39-48 of Wong).

(Z) Referring to claim 50, Wong discloses wherein the local image workstation further comprises a local image storage system that is adapted to store the electronic record (see abstract of Wong).

(AA) Referring to claim 54, Wong discloses a medical image management system, comprising:

- a medical imaging system which is adapted to produce an electronic record that comprises an electronic image associated with a region of a patient's body in a computer-readable format;

- a local image workstation which is adapted to communicate with the medical imaging device such that the electronic record may be transmitted from the medical imaging device and received by the local image workstation; and

- pushing means for pushing the electronic image to a remote image viewing system in a format such that the electronic record may be converted in order to represent the electronic image in a recognizable, visible format (Fig. 1 and col. 7, lines 1-28 of Wong).

(BB) Referring to claim 55, Wong discloses wherein the pushing means comprises:

a central data management system;

local pushing means for pushing the electronic record from the local image workstation to the central data management system; and

remote pushing means for pushing the electronic record from the central data management system to the remote image viewing station (Fig. 1 and col. 7, lines 1-28 of Wong).

(CC) Referring to claim 56, Wong discloses display means for displaying the electronic image at the remote image viewing system (col. 1, lines 32-38 of Wong).

(DD) Referring to claim 57, Wong discloses processing means associated with the central data management system for processing the electronic image in order to produce a result that is useful in the patient's healthcare management (col. 3, lines 30-35 of Wong).

(EE) Referring to claim 58, Wong discloses a medical image management system, comprising:

a central data management system comprising a computer which is adapted to communicate with an electronic transmission means along a first remote interface and to electronically receive an electronic record from the electronic transmission means that includes an electronic image associated with a region of a patient's body, and that is also adapted to communicate with a remote image viewing system along a second remote interface and to push the electronic record in a DICOM format to the remote image viewing system (Fig. 1 and col. 7, lines 1-28 of Wong).

(FF) Referring to claim 59, Wong discloses a local image workstation adapted to communicate with a medical imaging system that produces the electronic image along a local interface at a first location, wherein the central data management system is adapted to communicate with the local image workstation along a remote interface from a second location remote from the first location in order to receive the electronic record from the local image workstation (Fig. 1 and col. 7, lines 1-28 of Wong).

(GG) Referring to claim 60, Wong discloses wherein the local image workstation is adapted to transmit the electronic record in a DICOM format, and the central data management system is adapted to receive the electronic record in the DICOM format (Fig. 1 and col. 7, lines 38-58 of Wong).

(HH) Referring to claim 62, Wong discloses further comprising a storage means for storing the electronic record (col. 3, line 61 – col. 4, line 14 and col. 1, lines 7-12 of Wong).

(II) Referring to claim 63, Wong discloses further comprising a storage system associated with the central data management system and which is adapted to store the electronic record in at least two relatively remote locations (col. 3, line 61 – col. 4, line 14 of Wong).

(JJ) Referring to claim 65, Wong discloses receiving along a first remote interface an electronic record from a medical imaging system located at a first location at a central data management system located at a second location that is remote from the first location, wherein the electronic record includes an electronic image that is associated with a body of a patient; and

pushing the electronic record from the central data management system along a second remote interface to a remote image viewing system located at a third location that is remote from the first and second locations (Fig. 1 and col. 7, lines 1-28 of Wong). (KK) Referring to claim 68, Wong discloses applying an application to the electronic image using the central data management system, wherein the application produces a result that is useful in the patient's healthcare management;

attaching the result to the electronic record to form a supplemented electronic record; and

transmitting the supplemented electronic record from the central data management system to at least one of the local image workstation and the remote image viewing system (col. 2, lines 17-51 of Wong).

(LL) Referring to claim 71, Wong discloses further comprising pushing the electronic record from the central data management system to the remote image viewing system in a DICOM format (col. 7, lines 38-58 of Wong).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-9 and 72-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (US 6,260,021 B1) in view of Hu et al. (US 6,621,918 B1).

(A) Referring to claims 5-9, Wong does not disclose wherein the medical imaging system is adapted to produce the electronic record in an original form having an original size; and the central data management system is adapted to push the electronic record to the remote viewing station in an uncompressed form with respect to the original size, wherein the central data management system is adapted to push the electronic record to the remote viewing system without any loss of information in the electronic record, wherein the medical imaging system is adapted to produce the electronic record in an original form having an original size; and the central data management system is adapted to push the electronic record to the remote image viewing system with a compressed size with respect to the original size, wherein the electronic record is pushed to the remote image viewing system without losing more than 1/3 of the information associated with the electronic image in the electronic record, and wherein the central data management system is adapted to push the electronic record to the remote viewing station with a compressed size of at least about 1.5 times with respect to the original form and size.

Hu discloses wherein the medical imaging system is adapted to produce the electronic record in an original form having an original size; and the central data management system is adapted to push the electronic record to the remote viewing station in an uncompressed form with respect to the original size, wherein the central data management system is adapted to push the electronic record to the remote

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viewing system without any loss of information in the electronic record, wherein the medical imaging system is adapted to produce the electronic record in an original form having an original size; and the central data management system is adapted to push the electronic record to the remote image viewing system with a compressed size with respect to the original size, wherein the electronic record is pushed to the remote image viewing system without losing more than 1/3 of the information associated with the electronic image in the electronic record, and wherein the central data management system is adapted to push the electronic record to the remote viewing station with a compressed size of at least about 1.5 times with respect to the original form and size. (see abstract and col. 7, line 40 – col. 8, line 13 of Hu).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Hu within Wong. The motivation for doing so would have been to efficiently utilize a given bandwidth of network during transmission (col. 7, lines 41-43 of Hu).

(B) Referring to claims 72-73, Wong does not disclose pushing the electronic record to the remote image viewing system without substantially compressing the electronic image and pushing the electronic record to the remote image viewing system after performing substantially loss-less compression to the electronic image.

Hu discloses pushing the electronic record to the remote image viewing system without substantially compressing the electronic image and pushing the electronic record to the remote image viewing system after performing substantially

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loss-less compression to the electronic image (see abstract and col. 7, line 40 – col. 8, line 13 of Hu).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Hu within Wong. The motivation for doing so would have been to efficiently utilize a given bandwidth of network during transmission (col. 7, lines 41-43 of Hu).

11. Claims 13 and 32-33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (US 6,260,021 B1) in view of Killcommons et al. (US 6,424,996).

(A) Referring to claim 13, Wong does not disclose wherein the remote interface comprises a digital subscriber line (DSL) interface.

Killcommons et al. discloses wherein the remote interface comprises a digital subscriber line (DSL) interface (col. 10, lines 58-66 of Kilcommons).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the feature of Kilcommons within Wong. The motivation for doing so would have been to provide high-speed transmissions (col. 1, lines 33-38 of Killcommons).

(B) Referring to claims 32 and 33, Wong does not disclose a printer that is adapted to interface with at least one of the medical image system, local image workstation, or central data management system and which is adapted to print a recognizable, visible film associated with the electronic image and a printer that is adapted to interface with at least one of the local image workstation and central data management system and

which is adapted to print a recognizable, visible film associated with the electronic image.

Kilcommons discloses a printer that is adapted to interface with at least one of the medical image system, local image workstation, or central data management system and which is adapted to print a recognizable, visible film associated with the electronic image and a printer that is adapted to interface with at least one of the local image workstation and central data management system and which is adapted to print a recognizable, visible film associated with the electronic image (col. 14, lines 64-67 of Killcommons).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Killcommons within Wong. The motivation for doing so would have been to provide a simple way to obtain a hard copy of the film associated with the electronic image.

12. Claims 20-24, 38-40, 51-53, 61, 64, 66-67, and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (US 6,260,021 B1) in view of Tipirneni (US 6,381,029 B1).

(A) Referring to claims 20-23, Wong does not disclose an image history record system having a remote history record system associated with the remote image viewing system and a central history record system associated with the central data management system, wherein the remote history record system is adapted to send a remote system message along the second remote interface to the central history record

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system, wherein the remote system message is associated with activity related to the electronic record that comprises at least one of a time that the electronic record is received at the remote image viewing system, a time that the electronic record is opened at the remote image viewing system, and a time that the electronic image is viewed at the remote image viewing system, wherein the image history record system further comprises a local history record system associated with the local image workstation; and the central history record system is adapted to send a central system message along the second interface to the local history record system, wherein the central system message contains at least a portion of the information contained in the remote system message, further comprising an image history record system associated with at least one of the central data management system, local image workstation, and medical imaging device and which is adapted to maintain an image history record that comprises at least one of locations where the electronic record has been sent, locations where the electronic record has been received, times when the electronic record has been sent to a location, times when the electronic record has been received at a location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location, wherein the image history record system comprises a central history record system associated with the central data management system; and the central history record system is adapted to send a central system message to the local image workstation that contains at least a portion of the image history record.

Tipirneni discloses an image history record system having a remote history record system associated with the remote image viewing system and a central history record system associated with the central data management system, wherein the remote history record system is adapted to send a remote system message along the second remote interface to the central history record system, wherein the remote system message is associated with activity related to the electronic record that comprises at least one of a time that the electronic record is received at the remote image viewing system, a time that the electronic record is opened at the remote image viewing system, and a time that the electronic image is viewed at the remote image viewing system, wherein the image history record system further comprises a local history record system associated with the local image workstation; and the central history record system is adapted to send a central system message along the second interface to the local history record system, wherein the central system message contains at least a portion of the information contained in the remote system message, further comprising an image history record system associated with at least one of the central data management system, local image workstation, and medical imaging device and which is adapted to maintain an image history record that comprises at least one of locations where the electronic record has been sent, locations where the electronic record has been received, times when the electronic record has been sent to a location, times when the electronic record has been received at a location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location, wherein the image history record system comprises a central history

record system associated with the central data management system; and the central history record system is adapted to send a central system message to the local image workstation that contains at least a portion of the image history record (col. 1, lines 27-63 and col. 5, lines 11-34 of Tipirneni).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Tipirneni within Wong. The motivation for doing so would have been to track the usage of the system (col. 5, lines 58-66 of Tipirneni).

(B) Referring to claim 24, Wong discloses wherein the local image workstation is adapted to display information contained in the central system message in a visible format (col. 1, lines 32-38 of Wong).

(C) Referring to claims 38-40, Wong does not disclose an image history record means for maintaining an image history record related to at least one of the transmission of the electronic record, the receipt of the electronic record, and the viewing of the electronic image, wherein the image history record means maintains an image history record related to each of the transmission of the electronic record, the receipt of the electronic record, and the viewing of the electronic image, and means for centrally managing the image history record at a central data management system located at a third location which is remote from the first and second locations; a communication means for communicating the image history record from the central data management system to a local image workstation at the first location; and a display means associated with the local image workstation at the first location for displaying the image history record.

Tipirneni discloses an image history record means for maintaining an image history record related to at least one of the transmission of the electronic record, the receipt of the electronic record, and the viewing of the electronic image, wherein the image history record means maintains an image history record related to each of the transmission of the electronic record, the receipt of the electronic record, and the viewing of the electronic image, and means for centrally managing the image history record at a central data management system located at a third location which is remote from the first and second locations; a communication means for communicating the image history record from the central data management system to a local image workstation at the first location; and a display means associated with the local image workstation at the first location for displaying the image history record.

(col. 1, lines 27-63 and col. 5, lines 11-34 of Tipirneni).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Tipirneni within Wong. The motivation for doing so would have been to track the usage of the system (col. 5, lines 58-66 of Tipirneni).

(D) Referring to claims 51-53, Wong does not disclose an image history record system associated with at least one of the local image workstation, central data management system, and remote image viewing system and which is adapted to maintain an image history record that contains history information related to at least one of locations where the electronic record has been sent, locations where the electronic record has been received, times when the electronic record has been sent to a location, times when the

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electronic record has been received at a location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location, wherein the image history record system further comprises: a remote history record system associated with the remote image viewing system; and a central history record system associated with the central data management system, wherein the remote history record system is adapted to send a remote system message from the remote image viewing system to the central history record system, which remote system message contains the history information related to activity at the remote image viewing system, and wherein the central history record system is adapted to send a central system message to the local history record system, which central system message contains at least a portion of the history information contained in the remote system message, and wherein the local image workstation is adapted to display the history information.

Tipirneni discloses an image history record system associated with at least one of the local image workstation, central data management system, and remote image viewing system and which is adapted to maintain an image history record that contains history information related to at least one of locations where the electronic record has been sent, locations where the electronic record has been received, times when the electronic record has been sent to a location, times when the electronic record has been received at a location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location, wherein the image history record system further comprises: a remote history record system associated with the

remote image viewing system; and a central history record system associated with the central data management system, wherein the remote history record system is adapted to send a remote system message from the remote image viewing system to the central history record system, which remote system message contains the history information related to activity at the remote image viewing system, and wherein the central history record system is adapted to send a central system message to the local history record system, which central system message contains at least a portion of the history information contained in the remote system message, and wherein the local image workstation is adapted to display the history information (col. 1, lines 27-63 and col. 5, lines 11-34 of Tipirneni).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Tipirneni within Wong. The motivation for doing so would have been to track the usage of the system (col. 5, lines 58-66 of Tipirneni).

(E) Referring to claim 61, Wong does not disclose wherein the central data management system comprises at least a portion of an image history record system that is adapted to maintain an image history record that contains information related to at least one of: locations where the electronic record has been sent from the central data management system, locations where the electronic record has been received from the central data management system, times when the electronic record has been transmitted from one location to another location, times when the electronic record has

been received at one location from another location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location.

Tipirneni discloses wherein the central data management system comprises at least a portion of an image history record system that is adapted to maintain an image history record that contains information related to at least one of: locations where the electronic record has been sent from the central data management system, locations where the electronic record has been received from the central data management system, times when the electronic record has been transmitted from one location to another location, times when the electronic record has been received at one location from another location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location (col. 1, lines 27-63 and col. 5, lines 11-34 of Tipirneni).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Tipirneni within Wong. The motivation for doing so would have been to track the usage of the system (col. 5, lines 58-66 of Tipirneni).

(F) Referring to claim 64, Wong discloses a local image workstation which is adapted to communicate with a medical imaging system along a local interface in order to electronically receive an electronic record from the medical imaging system that includes an electronic image that is associated with a region of a patient's body, and that is adapted to communicate with a central data management system along a remote

interface in order to push the electronic record to the central data management system (Fig. 1 and col. 7, lines 1-28 of Wong).

Wong does not disclose a system that is further adapted to receive and display a message from the central data management system related to an image history record with history information that contains at least one of: locations where the electronic record has been sent from the central data management system, locations where the electronic record has been received from the central data management system, times when the electronic record has been transmitted from one location to another location, times when the electronic record has been received at one location from another location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location.

Tipirneni discloses a system that is further adapted to receive and display a message from the central data management system related to an image history record with history information that contains at least one of: locations where the electronic record has been sent from the central data management system, locations where the electronic record has been received from the central data management system, times when the electronic record has been transmitted from one location to another location, times when the electronic record has been received at one location from another location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location (col. 1, lines 27-63 and col. 5, lines 11-34 of Tipirneni).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Tipirneni within Wong. The motivation for doing so would have been to track the usage of the system (col. 5, lines 58-66 of Tipirneni).

(G) Referring to claim 66-67, Wong does not disclose transmitting a central system message from the central data management system and to the local image workstation, wherein the message comprises history information that comprises at least one of: locations where the electronic record has been sent from the central data management system, locations where the electronic record has been received from the central data management system, times when the electronic record has been transmitted from one location to another location, times when the electronic record has been received at one location from another location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location and receiving the electronic record at the remote image viewing system and opening the electronic image at the remote image viewing system, wherein the history information comprises the time and location of the receiving and viewing of the electronic image at the remote image viewing system; and communicating the history information from the remote image viewing system and to the central data management system via a remote system message before sending the central history message from the central data management system to the local image workstation.

Tipirneni discloses transmitting a central system message from the central data management system and to the local image workstation, wherein the message

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comprises history information that comprises at least one of: locations where the electronic record has been sent from the central data management system, locations where the electronic record has been received from the central data management system, times when the electronic record has been transmitted from one location to another location, times when the electronic record has been received at one location from another location, times when the electronic record is opened at a location, and times when the electronic image is viewed at a location and receiving the electronic record at the remote image viewing system and opening the electronic image at the remote image viewing system, wherein the history information comprises the time and location of the receiving and viewing of the electronic image at the remote image viewing system; and communicating the history information from the remote image viewing system and to the central data management system via a remote system message before sending the central history message from the central data management system to the local image workstation location (col. 1, lines 27-63 and col. 5, lines 11-34 of Tipirneni).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Tipirneni within Wong. The motivation for doing so would have been to track the usage of the system (col. 5, lines 58-66 of Tipirneni).

(H) Referring to claim 83, Wong discloses a central image management system configured to receive an image file form an imaging center, to store the image file in

long-term storage, and to transmit the image file to a designated location (see abstract and col. 7, lines 1-28 of Wong).

Wong does not disclose creating a history record associated with the image file, wherein the history record includes one or more data selected from a location where the image file is transmitted, when the image is transmitted to the location, when the image is received by the location, and when the image has been opened at the location; and wherein the central data management system is arranged to update the history record to include an additional of said one or more data.

Tipirneni discloses creating a history record associated with the image file, wherein the history record includes one or more data selected from a location where the image file is transmitted, when the image is transmitted to the location, when the image is received by the location, and when the image has been opened at the location; and wherein the central data management system is arranged to update the history record to include an additional of said one or more data (col. 1, lines 27-63 and col. 5, lines 11-34 of Tipirneni).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Tipirneni within Wong. The motivation for doing so would have been to track the usage of the system (col. 5, lines 58-66 of Tipirneni).

13. Claims 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (US 6,260,021 B1) in view of Straube et al. (US 2002/0007287 A1).

(A) Referring to claims 27 and 28, Wong does not disclose wherein the central data management system comprises an internet-accessible applications service provider (ASP) with an application which is adapted to perform an operation based upon the electronic record that produces a result that is useful in managing the patient's healthcare and wherein the application is accessible via the internet.

Straube discloses wherein the central data management system comprises an internet-accessible applications service provider (ASP) with an application which is adapted to perform an operation based upon the electronic record that produces a result that is useful in managing the patient's healthcare and wherein the application is accessible via the internet (see abstract, para. 27, and para. 28 of Straube).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Straube within Wong. The motivation for doing so would have been to provide worldwide access to the system (para. 29 of Straube).

(B) Referring to claim 29, Wong discloses wherein the application comprises a radiology information system (RIS) that is adapted to store healthcare management-related data with the electronic image as a part of the electronic record (col. 1, lines 52-59 of Wong).

(C) Referring to claim 30, Wong discloses wherein the RIS is adapted to store healthcare billing-related information in the electronic record (col. 2, lines 40-44 of Wong).

(D) Referring to claim 31, Wong discloses wherein the RIS is adapted to store time-based scheduling-related information associated with the patient's healthcare in the electronic record (col. 2, lines 40-45 of Wong).

14. Claims 69-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong (US 6,260,021 B1) in view of Ross et al. (5,617,861).

(A) Referring to claims 69 and 70, Wong does not disclose applying the application to the electronic image such that the result is adapted to diagnose a parameter associated with Alzheimer's Disease and applying the application to the electronic image by performing a spectroscopic analysis of the electronic image.

Ross discloses applying the application to the electronic image such that the result is adapted to diagnose a parameter associated with Alzheimer's Disease and applying the application to the electronic image by performing a spectroscopic analysis of the electronic image (col. 24, lines 15-29 and col. 2, lines 32-37 of Ross).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Ross within Wong. The motivation for doing so would have been to establish a non-invasive test procedure for diagnosing Alzheimer Disease (col. 1, lines 49-53 of Ross).

15. Claims 74-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (US 6,260,021 B1) in view of Pendlebury (US 2002/0016774 A1), and further in view of Babula et al. (US 2002/0004798 A1)

(A) Referring to claim 74, Wong discloses providing a local image workstation adapted to communicate with a medical imaging system managed by a medical imaging center along a local interface at a first location and to receive a plurality of electronic records

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from the medical imaging system each comprising at least one electronic image that represents at least a portion of a patient's body; a central data management system that is adapted to communicate with the local image workstation along a remote interface from a second location that is remote from the first location, and a remote image viewing system that is managed by adapted to communicate with the central data management system along a second remote interface from a third location that is remote from the first and second locations; pushing the plurality of electronic records from the local image workstation to the remote image viewing system via the central data management system and along the first and second remote interfaces (Fig. 1 and col. 7, lines 1-28 of Wong).

Wong does not disclose an ASP and charging only the medical imaging center a pre-determined, fixed, periodic fee for the pushing of the electronic records through the central data management system regardless of the volume of electronic records pushed.

Pendlebury discloses an ASP (para. 14 of Pendlebury).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the feature of Pendlebury within Wong. The motivation for doing so would have been to avoid the costly purchasing of a license to use the application (para. 14 of Pendlebury).

Babula discloses charging only the imaging system a pre-determined, fixed, periodic fee for the pushing of the electronic records through the central data

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management system regardless of the volume of electronic records pushed (para. 1, para. 9, and para. 43 of Babula).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Babula within Wong. The motivation for doing so would have been to provide the opportunity to arrange for different types of subscription fees (para. 43 of Babula).

(B) Referring to claim 75, Wong discloses providing a communication link for the first and second remote interfaces with the central data management system via an IP address associated with the central data management system on the internet (col. 6, lines 44-55 and Fig. 1 of Wong).

(C) Referring to claim 76, Wong discloses providing the remote image viewing system at least in part by providing software that is downloadable over the second remote location onto a computer at the third location (col. 1, lines 39-46 of Wong).

(D) Referring to claim 77, Wong does not disclose wherein the software may be downloaded free of charge.

Pendlebury discloses wherein the software may be downloaded free of charge (para. 44 of Pendlebury).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the feature of Pendlebury within Wong. The motivation for doing so would have been to encourage usage of the software.

(E) Referring to claim 78, Wong discloses wherein the local image workstation comprises a computer, and the local image workstation including the computer is

provided to the medical imaging clinic for use in the medical image management system without directly charging the medical imaging clinic for the local image workstation (Fig. 1 and col. 3, lines 4-14 of Wong; the Examiner interprets "hospital" to be a form of "clinic").

(F) Referring to claim 79, Wong discloses providing a medically useful diagnostic application on the central data management system that is adapted to perform a diagnostic operation on the electronic image at the central data management system to produce a medically useful result; and communicating the result to at least one of the local image workstation or the remote image viewing system in a computer readable form (col. 1, line 65 – col. 2, line 6 of Wong).

Wong and Pendlebury do not disclose wherein the result is provided without directly charging the medical imaging clinic or a user operating the remote image viewing system.

Babula discloses without payment of a fee (para. 43 of Babula).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the feature of Babula within Wong and Pendlebury. The motivation for doing so would have been to encourage usage of the system.

16. Claims 80-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. (US 6,260,021 B1) in view of Segal et al. (US 2001/0041991 A1), and further in view of Babula et al. (US 2002/0004798 A1).

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(A) Referring to claim 80, Wong discloses providing a central data management system configured to receive and store one or more electronic image files from an imaging center, and to transmit the one or more electronic image files to a remote viewer (see abstract and Fig. 1 of Wong).

Wong does not disclose billing for long-term storage of an electronic medical image file and charging the imaging center a fixed fee for a predetermined period of time of storage.

Segal discloses billing for long-term storage of an electronic medical image file (para. 78 and para. 154 of Segal).

Babula discloses charging a fixed fee for the services provided (para. 43 of Babula; the Examiner interprets “one-time fee arrangement” to be a form of “fixed fee”).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Segal and Babula within Wong. The motivation for doing so would have been for the service provider to be reimbursed for services rendered.

(B) Referring to claims 81 and 82, Wong does not disclose wherein said predetermined fixed fee is charged for transmitting said one or more electronic medical images to one or more designated locations and wherein said imaging center comprises an imaging machine and wherein said fixed fee is for the storage and transmission of one or more image files originating from the imaging machine.

Segal discloses wherein said predetermined fixed fee is charged for transmitting said one or more electronic medical images to one or more designated locations and

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wherein said imaging center comprises an imaging machine and wherein said fixed fee is for the storage and transmission of one or more image files originating from the imaging machine (para. 19 and para. 133 of Segal; the Examiner interprets "mammograms" to be a form of "images").

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the features of Segal within Wong. The motivation for doing so would have been to reimburse the service provider for services rendered.

Conclusion


17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lena Najarian whose telephone number is (571) 272-7072. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571) 272-6776. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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